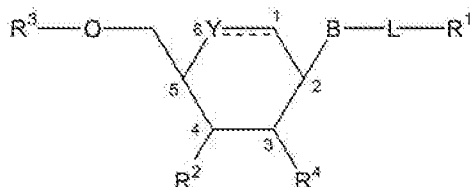


AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A compound comprising a structure of the formula



wherein L is a linking moiety;

B is a heterocyclic base;

R<sup>1</sup> is selected from the group consisting of a protecting group, a label, a solid phase, and -H;

R<sup>2</sup> is selected from the group consisting of -H and -OR<sup>6</sup>;

R<sup>3</sup> is selected from the group consisting of a protecting group, a linking moiety covalently coupled to a solid phase, a phosphate, a phosphoramidite, an H-phosphonate, and a triphosphate;

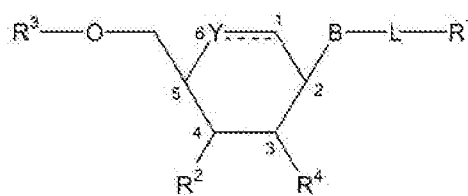
R<sup>4</sup> is selected from the group consisting of -H, -OH, alkyl, halogen, -O-R<sup>5</sup>, -S-R<sup>5</sup>, NR<sup>5</sup>R<sup>5a</sup>, a label, and a linking moiety covalently coupled to a solid phase;

R<sup>6</sup> is selected from the group consisting of -H, a protecting group, a linking moiety covalently coupled to a solid phase, a phosphoramidite, and a H-phosphonate;

Y is selected from the group consisting of O, S, NR<sup>5</sup>, CR<sup>5a</sup>R<sup>5b</sup>, and CR<sup>5a</sup>, and the bond between the C-1 atom of the six-membered ring and Y is a single bond when Y is O, S, NR<sup>5</sup>, or CR<sup>5a</sup>R<sup>5b</sup> and a double bond when Y is CR<sup>5a</sup>; and

R<sup>5</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, a protecting group, and -H, and R<sup>5a</sup> and R<sup>5b</sup> are selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, and -H, with the proviso that when R<sup>1</sup>, R<sup>3</sup>, or R<sup>6</sup> is a solid phase, then the other two residues selected from the group consisting of R<sup>1</sup>, R<sup>3</sup>, and R<sup>6</sup> are not a solid phase.

2. (original) The compound according to claim 1 wherein the linking moiety L comprises carbon, oxygen or nitrogen atoms and a reactive group.
3. (original) The compound according to claim 1 wherein R<sup>1</sup> is a label selected from the group consisting of a dye and a hapten.
4. (original) The compound according to claim 3 wherein R<sup>1</sup> is a dye selected from the group consisting of a fluorescein dye, a rhodamine dye, a cyanine dye, a coumarin dye, and an azo dye.
5. (original) The compound according to claim 3 wherein the hapten is biotin.
6. (currently amended) The A compound according to claim 4 comprising a structure of the formula



wherein

L is a linking moiety;

B is a heterocyclic base;

R<sup>1</sup> is selected from the group consisting of a protecting group, a label, a solid phase, and -H;

R<sup>2</sup> is selected from the group consisting of -H and -OR<sup>6</sup>;

R<sup>3</sup> is selected from the group consisting of a protecting group, a linking moiety covalently coupled to a solid phase, a phosphate, a phosphoramidite, an H-phosphonate, and a triphosphate;

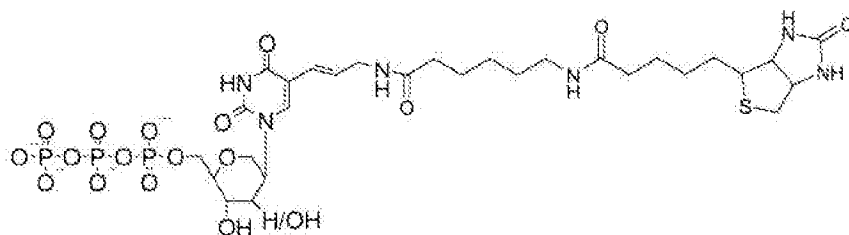
R<sup>4</sup> is selected from the group consisting of -H, -OH, alkyl, halogen, -O-R<sup>6</sup>, -S-R<sup>5</sup>, NR<sup>6</sup>R<sup>5a</sup>, a label, and a linking moiety covalently coupled to a solid phase;

R<sup>6</sup> is selected from the group consisting of -H, a protecting group, a linking moiety covalently coupled to a solid phase, a phosphoramidite, and a H-phosphonate;

Y is CR<sup>5a</sup> wherein and R<sup>5a</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, and -H, and the bond between the C-1 atom of the six-membered ring is a double bond; and

R<sup>5</sup> is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, a protecting group, and -H, and R<sup>4a</sup> and R<sup>5b</sup> are selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, and -H.

7. (original) The compound according to claim 1 wherein Y is selected from the group consisting of O, S, and CR<sup>5a</sup>R<sup>5b</sup>.
8. (original) The compound according to claim 1 wherein R<sup>3</sup> is a triphosphate, R<sup>2</sup> is -OR<sup>6</sup> wherein R<sup>6</sup> is -H, and R<sup>4</sup> is -H or -OH.
9. (original) A compound having the formula:



10. (original) The compound according to claim 1 wherein  $R^2$  is  $-OR^6$  wherein  $R^6$  is a phosphoramidite and  $R^3$  is a protecting group or a solid phase covalently coupled to a linking moiety.
- 11-34 (canceled)
35. (original) A kit of parts comprising a compound according to claim 8, nucleoside triphosphates, and a polymerase.
36. (original) A kit of parts comprising a compound according to claim 9, nucleoside triphosphates, and a polymerase.
37. (new) The compound according to claim 8 wherein B is a heterocyclic base selected from the group consisting of adenine, guanine, cytosine, thymine, uracil, and methylcytosine.
38. (new) The compound according to claim 1 wherein  $R^2$  is  $-OR^6$  wherein  $R^6$  is a phosphoramidite and  $R^3$  is a protecting group or a solid phase.
39. (new) The compound according to claim 38 wherein  $R^4$  is  $-H$  or  $-OH$ .

40. (new) The compound according to claim 39 wherein Y is selected from the group consisting of O, S, and CR<sup>5a</sup>R<sup>5b</sup>.
41. (new) The compound according to claim 1 wherein B is a heterocyclic base selected from the group consisting of adenine, guanine, cytosine, thymine, uracil, and methylcytosine, Y is O, and R<sup>4</sup> is -H or -OH.